


a dispensing device for dispensing additives.

 20. (Amended) Apparatus as claimed claim 10 wherein the apparatus is provided with a dispensing device for dispensing additives.

REMARKS

In the Official Action, an objection is made to the Information Disclosure Statement. Since this application is based on an International Application and the references were cited therein, the submission of the Information Disclosure is proper. See 35 USC 371. The International Search Report was established by the EPO and the PCT/DOE/EO/903 form from the USPTO indicates that copies of the report and cited documents are in the DO/EO file. However, for the convenience of the Examiner, attached is a copy of the 1449 and the references cited in the International Search Report.

In regard to the drawings, attached is a proposed drawing correction showing the location of "central shaft 11" and the "leveling device (24)" and "dispensing device (23)." The specification has been amended accordingly. Claim 8 has been canceled. No new matter is added by this amendment since these items were described in the specification and claims. Upon approval of the drawings, new formal drawings will be submitted.

In regard to the use of "figure" and "Figure," the lower case "f" was used on lines 32 and 35 because the words are within a sentence. Line 37 begins a new sentence; hence the use of a capital letter in "Figure." "Devices" and "tables" were corrected as suggested in the Office Action. Withdrawal of the objection to the disclosure is requested.

In regard to claim 7, the word "leveling" is spelled correctly in the claim as presented in the preliminary amendment. Withdrawal of the objection is requested.

Claims 1, 2 and 4 have been amended to delete the language "in particular" and "such as." Withdrawal of the 35 USC 112, second paragraph, rejection is requested.

The indication that claims 7, 8, 10-12 and 17-20 are allowable if rewritten in independent form is appreciated.

Claim 4 stands rejected as anticipated by Oetiker et al. Oetiker discloses an apparatus and process for measuring the moisture content of spoilable foodstuffs such as grain on a *continuous* basis. The moisture content is measured electrically with a capacitor by measuring the dielectric constant (ϵ) of the material. The apparatus allows for the continuous flow of material through a supply vessel 16 and discharge device 23.

In the Office Action, reference is made to items 16 and 23 as discussed above, but also to col. 1, line 62 to col. 2, line 7. This is part of the "Background of the Invention" and is not directed to the device including items 16 and 23. In the prior art device described in this section, a weighed quantity of material of grain is added to a measurement container, which is part of a condenser. A measurement is made by determining an electrical value in the form of the capacitance of the condenser constituted by the container with the product, which is converted to the quantity of water present in the sample.

Claim 4 is directed to an apparatus for determining the moisture content of bulk material comprising: a supply vessel placed on a weighing device; a feed device for feeding predetermined volumes to the supply vessel; a discharge device for the supply vessel; and a computer for determining the moisture content from the supplied volume and the measured weight.

The Oetiker device including items 16 and 23 is for continuous measurement using dielectric constants and does not teach or suggest a weighing device for measuring the moisture content of bulk material in accordance with instant claim 4. Moreover, the device of the background section does not weigh a predetermined volume and use a computer to determine the moisture content from the supplied volume and the measured weight. Instead it takes a pre-measured weight and uses a condenser and electrical values to determine moisture content.

Oetiker does not teach each and every element of the claimed invention as required under 35 USC 102. Withdrawal of this rejection is requested.

Claim 1 stands rejected as unpatentable over Robichaud. Robichaud describes measuring moisture content of compressible solids such as forest duff using a portable apparatus employing

surface probes (electrodes) that, when combined with moisture measurement circuitry, can provide real-time moisture content measurements.

Contrary to the position in the Office Action, Figure 7 is not directed to the volume of a quantity of bulk material. Instead, Figure 7 compares findings of volumetric moisture content (%) based on TDR (time domain reflectometry) values. Moreover, the Office Action is again combining prior art techniques with the disclosed invention. Column 1, lines 48-55, describes a prior art technique of taking samples to a lab, weighing the samples, drying the samples in an oven, and then measuring the samples again to determine moisture content. The Robichaud invention is directed to a portable device, which does not require sample to be collected and sent to a lab. Attention is drawn to col. 2, lines 33-38.

Claim 1 is directed to a method for determining the moisture content of bulk material comprising determining the volume of a quantity of bulk material, determining the weight of the quantity of bulk material, determining the specific density from the volume and the weight, and finally determining the moisture content by comparison with a table. Robichaud does not teach or suggest this method and withdrawal of this rejection is requested.

Claim 1 stands rejected as unpatentable over Hane. Hane describes an apparatus and method for measuring the thickness corrected moisture ratio of a material, in particular wood, utilizing microwaves and measuring the damping and phase change to determine the moisture content of the wood.

The Office Action is picking and choosing from two background references and the Hane disclosure to justify this rejection. The volume of the material disclosed at column 2, lines 33-45, is part of a method described by Kraszewski in an article found in *Journal of Microwave Power*. The weight of material at column 1, lines 40-41, is part of another background method of measuring the moisture ratio of organic material. The Office Action refers to column 6, lines 60-65, which is directed to complicating factors in determining moisture ratios due to swelling of the organic material, in particular wood.

Hane simply does not teach or suggest a method for determining the moisture content of bulk material comprising determining the volume of a quantity of bulk material, determining the

weight of the quantity of bulk material, determining the specific density from the volume and the weight, and finally determining the moisture content by comparison with a table. Instead Hane utilizes microwaves for measurement of moisture. Withdrawal of this rejection is requested.

Claims 2 and 3 stand rejected as unpatentable over Hane in view of Cherry et al. Claim 2 is directed to a method for preparing bulk material with a predetermined moisture content comprising determining the volume of a quantity of bulk material, determining the weight of the quantity of bulk material, and adding water to the quantity of bulk material until the weight associated with the desired moisture content is obtained.

Hane does not teach or suggest the method of claim 2 for the same reasons that Hane does not teach or suggest the method of claim 1. The Office Action is impermissibly picking and choosing from two prior art documents (discussed in Hane) and part of the Hane's disclosure to justify the rejection. Hane is directed to measurement of moisture content of organic material such as wood, e.g. solid type material.

Cherry does not remedy the defects of Hane. Cherry is directed to the use of electromagnetic signals to monitor water content of a medium such as compost. The system requires an electromagnetic signal generator and transmission line disposed in a medium. The types of materials that Hane and Cherry are measuring are different. Moreover, the addition of water in Example 3 of Cherry was made after the compost had been air dried and was part of the process of determining the MAG vs. Signal Propagation Time for FIG 3 and there is no reason that Hane would have been modified based on this example. Withdrawal of this rejection is requested.

Claims 5, 6, 9, and 13-16 stand rejected as unpatentable over Oetiker et al in view of Bajema et al. Claims 5, 6, 9, and 13-16 all ultimately depend from claim 4. Oetiker does not teach or suggest the apparatus of claim 4 for the reasons identified above. Specifically the Oetiker device including items 16 and 23 is for continuous measurement using dielectric constants and does not teach or suggest a weighing device for measuring the moisture content of bulk material in accordance with instant claim 4. Bajema does not remedy the defects of Oetiker.

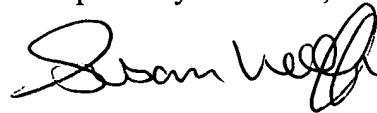
Bajema is directed a ground-crop harvester control system. The Bajema system is not related to an apparatus for measuring moisture content. There is no reason one skilled in the art would have modified Oetiker based on Bajema and arrive the apparatus of the claims. Withdrawal of the instant rejection is requested.

CONCLUSION

In view of the above amendments and remarks, withdrawal of the instant objections and rejections and issuance of a Notice of Allowance is requested.

Annexed hereto is a marked-up version of the amendments made in the instant amendment.

Respectfully submitted,



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Attachment:

1. Marked-Up Version of Amendments Made



MARKED UP VERSION OF AMENDMENTS MADE

IN THE SPECIFICATION:

Page 3, replace the paragraph at lines 18-32 with the following:

For supplying of potting soil use is made of a second conveyor belt 15 for bulk material. The second conveyor belt 15 leads to a mixing vat 16 where the supplied material is reduced in size by means of a screw 17 and homogenized as well as possible. From mixing vat 16 the potting soil comes to lie on a third conveyor belt 18, which leads via a chute 19 to the top side of vessel 1. A laser measuring device 20 is arranged on chute 19 for measuring the height of the supplied strip of potting soil. According to the shown embodiment the laser height measuring device 20 is provided with a laser head which determines the height of the supplied quantity of soil by means of a repetitive swinging movement. It is possible to make use of other types of laser measuring devices, for instance provided with a levelling device 24.

Page 4, replace the paragraph at lines 1- 16 with the following:

Assuming that vessel 1 is empty, soil is fed to vessel 1 via conveyor belts 15, mixing vat 16, the third conveyor belt 18 and chute 19. The volume of soil supplied is herein determined by means of the integrating laser height measuring device. When a desired volume quantity has been supplied, the feed of potting soil is stopped and the weighing device formed by pressure sensors 3 is activated. The weight resulting herefrom is carried to a measuring computer, not shown in the drawings, whereafter the computer determines the density of the quantity of potting soil on the basis of the weight. It is hereby possible, and with reference to a for instance empirically formulated table, to determine the moisture content of the potting soil. It is herein possible to employ different types of tables for different types of potting soil.

Page 5, replace the third paragraph with the following:

It is further possible to arrange a dispensing device 23 on the mixing vat in order to add additives such as fertilizer, pesticides/herbicides and so on to the growing substrate.

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IN THE CLAIMS:

Claims 1-20 have been amended herein as follows:

1. (Amended) Method for determining the moisture content of bulk material, ~~in particular growing substrate such as potting soil, characterized in that~~ comprising
-~~determining~~ the volume of a quantity of bulk material ~~is determined~~,
-~~determining~~ the weight of the quantity of bulk material ~~is determined~~,
-~~determining~~ the specific density ~~is then determined~~ from the volume and the weight, and
-finally determining the moisture content ~~is determined~~ by comparison with a table.
2. (Amended) Method for preparing bulk material, ~~in particular potting soil, with a predetermined moisture content, characterized in that~~ comprising
-~~determining~~ the volume of a quantity of bulk material ~~is determined~~,
-~~determining~~ the weight of the quantity of bulk material ~~is determined~~, and
-~~adding~~ water ~~is then added~~ to the quantity of bulk material until the weight associated with the desired moisture content is obtained.
3. (Amended) Method as claimed in claim 2, ~~characterized in that further comprising, after adding the water, has been added~~ mixing the bulk material ~~is mixed~~ with the water.
4. (Amended) Apparatus for determining the moisture content of bulk material, ~~in particular potting soil, characterized in that the apparatus comprises~~ comprising:
-a supply vessel placed on a weighing device;
-a feed device for feeding predetermined volumes to the supply vessel;
-a discharge device for the supply vessel; and
-a computer for determining the moisture content from the supplied volume and the measured weight.

5. (Amended) Apparatus as claimed in claim 4, ~~characterized in that~~ wherein the feed device comprises a conveyor belt which comprises a measuring member for measuring the height of the bulk material carried along on the conveyor belt, and that the computer is adapted to determine from the measured height the quantity of material carried along on the conveyor belt.

6. (Amended) Apparatus as claimed in claim 5, ~~characterized in that~~ wherein the measuring member comprises a laser source and a laser detector, wherein these elements are adapted to determine the height of the material carried along on the conveyor belt.

7. (Twice Amended) Apparatus as claimed in claim 5, ~~characterized in that~~ further comprising a leveling device ~~is placed~~ above the conveyor belt upstream of the measuring member for leveling to a uniform height the material carried along on the conveyor belt.

9. (Twice Amended) Apparatus as claimed in claim 4, ~~characterized in that~~ wherein the supply vessel is tiltable.

10. (Twice Amended) Apparatus as claimed in claim 4, ~~characterized in that~~ wherein the apparatus is also suitable for preparing bulk material with the desired moisture content in that a water supply device is placed above the supply vessel in order to supply water to the supply vessel.

11. (Twice Amended) Apparatus as claimed claim 4, ~~characterized in that~~ wherein the apparatus is provided with a dispensing device for dispensing additives.

12. (Amended) Apparatus as claimed in claim 6, ~~characterized in that~~ further comprising a leveling device ~~is placed~~ above the conveyor belt upstream of the measuring member for leveling to a uniform height the material carried along on the conveyor belt.

13. (Amended) Apparatus as claimed in claim 5, ~~characterized in that~~ wherein the supply vessel is tiltable.

14. (Amended) Apparatus as claimed in claim 6, ~~characterized in that~~ wherein the supply vessel is tiltable.

15. (Amended) Apparatus as claimed in claim 7, ~~characterized in that~~ wherein the supply vessel is tiltable.

16. (Amended) Apparatus as claimed in claim 8, ~~characterized in that~~ wherein the supply vessel is tiltable.

17. (Amended) Apparatus as claimed in claim 7, ~~characterized in that~~ wherein the apparatus is also suitable for preparing bulk material with the desired moisture content in that a water supply device is placed above the supply vessel in order to supply water to the supply vessel.

18. (Amended) Apparatus as claimed in claim 8, ~~characterized in that~~ wherein the apparatus is also suitable for preparing bulk material with the desired moisture content in that a water supply device is placed above the supply vessel in order to supply water to the supply vessel.

19. (Amended) Apparatus as claimed claim 6, ~~characterized in that~~ wherein the apparatus is provided with a dispensing device for dispensing additives.

20. (Amended) Apparatus as claimed claim 10, ~~characterized in that~~ wherein the apparatus is provided with a dispensing device for dispensing additives.